

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** April 18, 2018

**LOCATION OF CONFERENCE:** John O. Morton Building

**ATTENDED BY:**

**NHDOT**

Matt Urban  
Sarah Large  
Marc Laurin  
Keith Cota  
Mark Hemmerlein  
Chris Carucci  
Meli Dube  
Bob Landry  
Don Lyford  
Bill Saffian  
Trent Zanes  
Brian Lombard  
Maggie Baldwin  
Kevin Nyhan  
Bob Juliano  
Steve Johnson  
Shelly Winters

**ACOE**

Mike Hicks

**Federal Highway**

Jamie Sikora

**EPA**

Mark Kern

**US Coast Guard – Bridges**

Jim Rousseau

**NHDES**

Gino Infascelli  
Lori Sommer  
Tim Drew  
Chris Williams

**NHF&G**

Carol Henderson

**NH Natural Heritage  
Bureau**

Amy Lamb

**NH Office of Energy and  
Planning**

Jennifer Gilbert  
Samara Ebinger

**NH Department of Business  
& Economic Affairs**

Jimmie Hinson

**Consultants/Public  
Participants**

Chris Bean  
Leo Tidd  
Vicki Chase  
Pete Walker  
Christine Perron  
Jim Fougere  
Janusz Czyzowski  
Colin Lentz

*(When viewing these minutes online, click on an attendee to send an e-mail)*

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:** *(minutes on subsequent pages)*

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## **NOTES ON CONFERENCE:**

### **Finalization of March 21<sup>st</sup> 2018 Natural Resource Agency Meeting Minutes.**

Matt Urban ask the group if there were any other comments or edits March 21<sup>st</sup>, 2018 meeting minutes. We had received only a few comments. No one objected to finalizing both sets of minutes. The minutes were finalized and posted after the meeting.

### **Derry- Londonderry, #13065 (IM-0931(201))**

Keith Cota provided a recent history of the project. In 2016 the NHDOT was approached by the towns of Derry and Londonderry about moving the Supplemental Draft EIS (SDEIS) for Exit 4A forward. NHDOT entered into a Memorandum of Agreement to assist the towns. Once the NEPA process is complete, the NHDOT will take full responsibility for the project and will carry the project forward into design, right-of-way acquisition and permitting. The first step of NEPA was to update the reasonable range of alternatives, re-establish the purpose and need, and re-evaluate the alternative impacts.

Chris Bean reviewed the purpose and need of the project. The purpose of the project is to “reduce congestion and improve safety along NH 102 from I-93 easterly through downtown Derry and promote economic vitality in the Derry/Londonderry area.” An 11x17 paper copy of the Alternative Impact matrix was distributed. [See updated version in the attached PowerPoint.]

The five build alternatives were reviewed (refer to attached PowerPoint).

The I-93 Exit 4A Draft Alternatives Comparison Matrix was reviewed.

Traffic – The 2007 DEIS used 2030 for the design year of I-93 and 2020 for the local roads. The SDEIS is based on a 2040 design year for all roadways. Alternatives A, B, and C are all comparable in traffic reductions along NH Route 102 compared to the No-Build for downtown Derry.

Employment – Alternatives A and B have equivalent increases in employment. Alternatives C, D, and F have no impact on employment.

Construction and Utility costs - Alternative A has the highest proposed construction costs but has much lower utility costs, so total cost is the lowest (other than Alternative F).

Socioeconomic impacts - Alternative A has the highest number of business displacements, but there are two business condos with several businesses within. Alternative A has the lowest acreage of ROW takings.

Gino Infascelli asked if there was an Alternative E – there is currently no Alternative E.

V. Chase reviewed natural resource impacts.

Rare Species – Currently waiting for updated NHNHB data. A data request response shows some occurrences in and near the project area, but the scale of the map makes it difficult to discern if the

occurrences are within the footprint. The most recent response listed an occurrence not previously listed for a species of grass (Nuttall's reed grass) that is best surveyed in the fall, so there will not be an opportunity to survey before the SDEIS is completed. Plant surveys were undertaken in 2016 and no rare species were found during the surveys.

Acoustic surveys for Northern Long-Eared Bats were also undertaken in 2016, and no occurrences were identified. Since then, little brown bats have been listed as state-endangered. Normandeau has the recordings from the NLEB surveys and can review those for occurrences of little brown bats. If they are found additional coordination will occur with New Hampshire Fish and Game.

Wetland impacts – Alternative A has the least wetland impacts other than Alternative F, which has no wetland impacts. There is one Prime wetland off of Tsienneto Road which will be impacted by Alternatives A, B, C, and D.

Vernal pools – vernal pools were ranked by low, medium and high productivity. Alternative A has the most acreage of vernal pool impacts, but Alternative B impacts has more high productivity vernal pools.

Stream impacts – there are both existing crossings that would be expanded and new crossings proposed. For Alternatives A, B, C, and D, Alt A has the least square footage of stream impacts. The footprint of the I-93 expansion was excluded from impact calculations, since impacts for I-93 were already accounting for through their permitting process. (The I-93 footprint is not depicted on the graphics that were presented in the PowerPoint accompanying the presentation.)

Impaired waters – there is a TMDL for chloride for the Beaver Brook watershed and the Alternatives all lie entirely within the Beaver Brook watershed. Aquatic life in the watershed is impaired by pH, Chloride, and Benthic-Macroinvertebrate Bioassessments.

Wildlife Habitat – undeveloped areas east of the interchange for Alternatives A and B are listed in the 2015 WAP as “supporting landscapes”, and the new alignment for those alternatives would impact that habitat. A small amount of Highest Ranked Habitat in the Biological Region is impacted by Alternatives C and D.

In summary: Alternative A is still the Preferred Alternative as it has:

- Lowest cost, including utilities
- Least acreage of ROW acquisitions
- Least square footage of stream impacts
- Lowest wetland impacts of alternatives that meet the purpose and need.
- No impact to WAP highest ranked habitat

C. Bean reviewed upcoming schedule and milestones:

- Public Meeting in late May at which findings will be presented.
- Another public meeting later in the summer (July).
- Public Hearing for Alternative A in the fall of 2018.
- Final EIS and ROD will be completed in February 2019.

Final Traffic Report and Interchange Justification Report will be submitted to the Participating Agencies on April 27, 2018.

Participating Agencies will receive Chapter 4 (Impact Assessment) of the SDEIS as it is completed. A revised Participating Agency submission schedule will be published soon.

K. Cota clarified that the project will go back to a public hearing process. The hearing will likely be a joint public hearing process with the Army Corps of Engineers and NHDES.

C. Henderson asked why there were so few threatened and endangered species listed on the matrix and stated that the New England cottontail and turtles need to be further coordinated with Fish and Game – Vicki noted the matrix represents the number of species occurrences that fall within the footprint. *[As a further clarification, the scale and resolution of the datacheck response map make it very difficult to identify which occurrences fall within the Alternative footprints. These numbers will be clarified, and additional coordination with both NHNHB and NHF&G will occur when the data is received.]*

A. Lamb asked why a survey for Nuttall's reed grass would not be undertaken – Vicki noted the survey would not be able to be completed before the SDEIS progressed, so a survey might be a condition of the ROD.

G. Infascelli pointed out that there was an existing wetland file for the project and the number should have been added to the agenda item request form.

L. Sommer asked when mitigation could be discussed and when it would be presented to the community. C. Bean indicated that we would return to a Natural Resource Agency meeting to discuss mitigation in the upcoming months. K. Cota clarified that it would be prior to the July public information meeting.

M. Kern asked if there was a way to compare the alternatives for chloride loading. Vicki noted the matrix includes lane miles, but the lane miles shown in the table are not the same as those used for salt loading analysis due to salt spreading practices. The matrix will be modified to provide a comparison of lane miles that are consistent with the lane miles calculation methodology used for chloride loading for each Alternative. In this way, the relative chloride loading of each alternative can be judged by lane miles (since salt loading would be directly proportional to lane miles).

L. Sommer asked if vernal pools would be surveyed in 2018. There are no provisions to perform additional vernal pool surveys because adequate data to characterize the vernal pools has previously been obtained through several years of surveys/monitoring between 2006 and 2015.

*This project has been previously discussed at the 5/28/1997, 3/17/1999, 6/16/1999, 10/20/1999, 11/17/1999, 8/16/1999, 9/20/2000, 7/18/2001, 8/17/2005, 3/15/2006, 5/16/2007, 1/20/2016, 2/17/2016, and 10/19/2016 Monthly Natural Resource Agency Coordination Meetings.*

**Newington-Dover, #11238S (NHS-027-1(037))**

We met to review the General Sullivan Bridge (GSB) project. The goal of the meeting was to discuss a list of preliminary alternatives that would be screened as part of the Supplemental Environmental Impact Statement (SEIS) currently being prepared for the project. Pete Walker and Keith Cota presented an overview of the project, discussed alternatives developed to date, reviewed public and agency coordination efforts, and outlined the process for screening alternatives. (See attached slides.)

Pete Walker provided a brief summary of the project background. The 2007 Newington-Dover Environmental Impact Statement (EIS) and 2008 Record of Decision (ROD), as well as the Section 106 Memorandum of Agreement (MOA) executed as part of the EIS, stipulated the General Sullivan Bridge (GSB) would be preserved for bicycle and pedestrian use. However, based on the results of intensive structural inspections and engineering analysis conducted from 2009 to 2017, NHDOT has found that rehabilitation of the General Sullivan Bridge would be riskier and more costly than anticipated. NHDOT believes that further study of alternatives is warranted. NHDOT made a request of FHWA for an opportunity to reconsider alternatives to the rehabilitation of the GSB; FHWA indicated that a SEIS would be necessary to re-evaluate alternatives.

As a first step in the SEIS process, FHWA sent an invitation to become a Cooperating or Participating Agency (December 21, 2017) to state, federal, and local agencies. This letter was followed by publication of a Notice of Intent to Prepare and EIS in the Federal Register (January 18, 2018). The USACOE, USCG, USEPA, and USFWS have all replied to accept as Cooperating Agencies. NHDES, NHNH, the Strafford Regional Planning Commission, and the Town of Durham have accepted as Participating Agencies.

Pete briefly reviewed the project Purpose and Need, which is to provide access and connectivity between Newington and Dover, across Little Bay, for non-motorized use. A draft written Purpose and Need statement was distributed to meeting participants. (See attached.)

Keith Cota summarized the Jan. 30th public information meeting. About 150 people attended. The public strongly supports maintenance of a bicycle and pedestrian connection between Newington and Dover; the public supports the project Purpose and Need. Many comments expressed concerns about the safety and age of GSB, but there were no strong objections to removing the GSB if that is selected as the rehabilitation of the GSB and that it may be the best use of public funds. Major concerns were also expressed about maintaining a bicycle/pedestrian crossing during construction of whatever alternative is selected.

Pete then presented a summary of the alternatives currently under consideration, some of which were described in a 2017 Type, Span, and Location Report (TS&L Report), and others were identified during the public involvement process. The alternatives are explained and illustrated in more detail in a memorandum from VHB to NHDOT dated April 5, 2018, *General Sullivan Bridge Supplemental Environmental Impact Statement Description of Bridge Alternatives*. This memorandum was distributed in advance of the current meeting.

Pete explained that the development of alternatives use the design guidelines of the American Association of State Highway and Transportation Officials (AASHTO), which specify a *minimum* path width of 12 feet for bicycle/pedestrian paths (10 feet for the path plus one foot on each side to clear obstructions). The guidelines also outline *desired* path widths, which would be 16 feet (12 feet for the path plus two feet on each side for obstructions) to allow two-way traffic and passing maneuvers.

Alternatives 1-4 were discussed in the 2017 Type, Size and Location report (TS&L):

- Alternative 1: Complete rehabilitation of GSB (consistent with the MOA);

- Alternative 2: Complete superstructure replacement of GSB, retaining the substructure;
- Alternative 3: Partial rehabilitation of GSB – rehabilitation of central spans 4-6, replacement of approach spans 1-3 and 7-9; and
- Alternative 4: Complete replacement of GSB, including the substructure.

New Alternatives have been added, based on input received since the TS&L. Many include the use and/or modification of the Little Bay Bridge (LBB):

- Alternative 5: Reconfigure existing southbound LBB. This alternative would only provide a two-foot wide path for bicycle/pedestrian traffic. This would not meet the Purpose and Need, and would therefore be eliminated in initial screening process
- Alternative 6: Widen the southbound LBB. This alternative would add one or more girders and a pier extension to the existing GSB substructure to support a widened LLB bridge. Several options have been developed, based on the evaluation of possible widths (minimum and/or desired combinations) of the path, and highway lanes and shoulders
- Alternative 7: New separate pedestrian/bicycle path superstructure. This alternative would separate the new path from the LBB on the existing GSB substructure and supported by a pier extension to the LLB superstructure but not connected to the LBB deck.
- Alternative 8: Rehabilitation of the GSB with a 75-year life span. This alternative would consider whether more extensive rehabilitation or maintenance regime would allow the rehabilitation alternative (i.e., Alternative 1) to last longer than the 40-year life span predicted in the TS&L.
- Alternative 9: Superstructure replacement of the GSB, with a girder/frame option. This alternative would be similar to Alternative 2, but would replace the GSB superstructure with a steel girder system rather than a truss. A stable minimum width is required and would need to be further evaluated. This width could be up to 25 feet wide. Two different configurations were shown. The existing GSB navigational clearance would be maintained.

Pete explained that the next step in the EIS process is to screen the alternatives to identify a reasonable range of alternatives. He reviewed the screening criteria:

- Purpose and Need: Does the alternative meet the project's purpose and need – provide bicycle and pedestrian access between Newington and Dover?
- Feasibility: Is the alternative technically feasible, providing a practical duration, without excessive impacts (environmental and access)?
- Cost: Is the cost for construction and life cycle in line with other alternatives?
- Safety: Is the alternative safe for automobiles, non-motorized vehicles, and pedestrians?
- Transportation Capacity: Does the alternative maintain or improve the vehicle capacity on the LBB, a major recent investment?

Pete briefly outlined the upcoming public involvement schedule. The Department is anticipating a second public information meeting this summer, at which a preliminary alternatives analysis would be presented. A third public information meeting would occur in Fall 2018, following issuance of a draft SEIS. The Supplemental ROD could be issued by the end of the year.

Mark Kern asked what part of the bridge is weakest? Keith replied that the deck and floor beams need complete replacement. The gusset plates are heavily impacted by pack rust. Pete mentioned that the bottom chord of Span 7 needs complete replacement. Keith explained that the TS&L report indicated that a rehabilitated bridge would likely only last for 40 years. The intent of Alternative 8 is to see if it is possible to extend that life span to 75 years and, if so, how much that would cost.

Jim Rousseau, USCG representative, explained that if NHDOT plans to replace the GSB, then any new bridge should match the navigational clearances of the LBB. The GSB and the two Little Bay Bridges were

all authorized under a single permit. NHDOT would need to apply for an amendment to that permit. If the rehabilitation alternative is chosen the work can be handled within the existing permit.

Mike Hicks asked if the current Newington-Dover permit addressed the GSB rehabilitation, and if a new permit application would be submitted or would a permit amendment be requested? Keith replied that NHDOT would be requesting an amendment of the Corps permit, but that the NHDES permit will be expired, so a new application would be submitted to NHDES. Mike asked that NHDOT send a pdf of the presentation used during the meeting. Mike also asked whether the existing piers would be modified? Keith explained that alternative 4 is the only one that would propose any work on the existing piers. All other alternatives would re-use the existing piers.

*This project has been previously discussed at the 12/20/2017, 8/20/2014, 6/18/2014, 3/19/2014, 3/21/2012, 8/17/2011, 8/19/2009, 10/15/2008, 3/21/2007, 2/21/2006, 12/14/2005, 11/2/2005, 8/17/2005, 7/20/2005, Monthly Natural Resource Agency Coordination Meetings.*

**Alexandria, #15937 (X-A1(047))**

Chris Carucci described the culvert rehabilitation project funded under the Federal Culvert Rehabilitation Program at two locations on NH 104 in Alexandria. The existing culverts are 60 inch and 66 inch corrugated aluminum pipes that were constructed in 1965 and have severe corrosion at the top of the pipes. The proposed advertising date is August 2018 with construction occurring in the Summer of 2019. Both culvert outlets are about 200 feet from the Smith River and within Shoreland jurisdiction.

Location 1 is a 128 foot long 60 inch culvert with stone headwalls. The culvert conveys a Tier 2 perennial stream with a 294 acres watershed. Hydraulic capacity is about 200 cfs. Bypass flows would be directed to an adjacent wetland where an existing 18 inch pipe would convey the water under NH 104. Location 2 is a 86 foot long 66 inch culvert with stone headwalls. The culvert conveys a Tier 2 intermittent stream with a 224 acre watershed. Hydraulic capacity is estimated at 280 cfs. Neither culvert is within the Smith River floodplain.

Replacement options were evaluated. Due to the height of the fill, around 16 - 18 feet at Location 1, and 8 -10 feet for Location 2, replacement would involve the closure of NH 104 for about a month. Traffic volume is about 2,800 vpd, with no easy detour on State routes with east-west through traffic needing to go through Franklin to access NH 11 and US 4. The replacement structures with a 1.2 X bankfull width, would be box culverts with 9 to 10 feet spans, with a cost estimate of \$500,000 each, not including PE and ROW costs.

The preferred alternative is to slip line the culverts with smaller corrugated metal pipes of 54 inch at Location 1 and 60 inch at Location 2. Existing capacity can be maintained using a liner with spiral corrugation, which has a roughness coefficient similar to concrete pipe. The inlet efficiency would be enhanced by constructing a 45% bevel. These changes will increase the outlet velocity, so a 20 to 25 foot long stone apron / channel lining is proposed at the outlets to dissipate energy and reduce velocity. A small amount of stone is also proposed at the inlets to protect the headwalls. The existing headwalls will be repaired. Cost for the slipline option would be \$50,000 to \$60,000 per location. The new pipes are anticipated to be pushed from the outlets. Access to

construct them would be through the guardrail along the existing fill slopes. There may be temporary impacts to an adjacent scrub-shrub wetland at Location 2 to access its outlet side.

Location 1 upstream impacts are estimated at 35 square feet permanent wetland, with 5 linear feet of stream and 500 square feet of temporary; and downstream impacts at 250 square feet permanent wetland, with 20 linear feet of stream and 200 square feet of temporary. Location 2 upstream impacts are estimated at 50 square feet permanent wetland, with 5 linear feet of stream and 500 square feet of temporary; and downstream impacts at 350 square feet permanent wetland, with 20 linear feet of stream and 1,600 square feet of temporary (including access through the adjacent scrub-shrub wetland). For total impacts of 650 square feet permanent wetland, 50 linear feet of stream and 3,000 square feet of temporary.

Matt Urban stated that the new stone apron impacts will be mitigated through an ARM fund payment. Carol Henderson and Lori Sommer inquired about the potential for perched conditions. Chris C. stated that the potential perched conditions will be eliminated with the addition of stone aprons to match the inlets and outlets elevations. Carol H. stated that corrugated is more beneficial for aquatic organism passage. Amy Lamb stated that there were no endangered species concerns. Jim Rousseau mentioned that the culverts were deemed as bridges, but are non-navigable. There were no objections to the project as presented.

*This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.*

**Concord-Pembroke, #41267 (X-A004(575))**

Chris Carucci, NHDOT Bureau of Highway Design, gave an introduction to the project including the location and scope of work. This is a culvert rehabilitation project funded under the Federal Culvert Rehabilitation Program and includes two locations under I-393, a single 84" corrugated metal pipe (CMP) and twin 54" CMPs, both constructed in 1987 with moderate rusting of the invert area. This effort is being made to repair these pipes while it is still feasible and before further deterioration occurs and costs and impacts associated with rehabilitation increase.

Location 1 includes the single 84" CMP which carries Cemetery Brook under I-393 just west of Exit 3 in Concord. This pipe is 394' long with stone headwalls, a 2.2% slope, and 9'-11' of roadway fill over the pipe. Streamstats indicated a drainage area of 0.68 square miles, or 435 acres. A field check incorporating closed drainage system inputs indicated a drainage area of 455 acres, both measurements would classify this as a Tier 2 stream crossing. The Streamstats Q50 is 77 cubic feet per second (CFS), the TR55 method predicts a Q50 of 130 CFS (based on 6.2" of rain over 24 hours), and one FHWA regression method predicts a range of 122 – 187 CFS. The current hydraulic capacity is approximately 345 CFS, based on a headwater depth of 8' which is the elevation of the lowest connected catch basin (CB).

Location 2 includes the twin 54" CMPs which carry an unnamed tributary under I-393 to outlet into the Soucook River. These pipes are 275' long with stone headwalls, a 10% slope and 8'-16' of roadway fill over the pipes. Streamstats indicated a drainage area of 0.82 square miles, or 528 acres. A field check incorporating closed drainage system inputs indicated a drainage area of 540 acres, both measurements would classify this as a Tier 2 stream crossing. The Streamstats Q50 is



127 CFS with a range of 70-234 CFS, the TR55 method predicts a Q50 of 260 CFS (based on 6.2" of rain over 24 hours), and one FHWA regression method predicts a range of 244 - 288 CFS. The current hydraulic capacity is approximately 330 CFS, based on a headwater depth of 7', when bypass flow along the roadside ditch would occur.

The preferred alternative is concrete invert repair. Based on the condition of these culverts, 3"-4" of concrete with wire mesh and minimal rebar will be sufficient. This treatment will not significantly affect capacity, but will increase velocity due to the smoother invert. Velocity in low flows will be similar to concrete pipe. At the 84" pipe outlet, a stone apron/channel lining is proposed to dissipate energy and reduce velocity. At the twin 54" location, the previous project included extensive stone lining at the inlet and outlet. We will propose resetting the existing stone as needed to match the new invert elevations and eliminate the perched outlet.

There is no upstream development at either location that would be impacted by headwaters. The outlet of Location 2 is located within the 100 year floodplain and protected shoreland of the Soucook River, however there are no records of flooding issues at either location. The anticipated proposed wetland impacts include:

1. Location 1 (Single 84" CMP):
  - a. Upstream: 85 s.f. permanent (18 linear feet) and 275 s.f. temporary
  - b. Downstream: 400 s.f. permanent (90 linear feet) and 300 s.f. temporary
2. Location 2 (Twin 54" CMPs):
  - a. Upstream: 500 s.f. temporary
  - b. Downstream: 2100 s.f. temporary

C. Carucci indicated that previous as-built plans show existing stone in all areas where stone placement will occur at Location 2 and therefore mitigation is not required for the work around the twin 54" CMPs as this is considered maintenance of existing infrastructure. Appropriate mitigation will be calculated for permanent impacts associated with stone placement at the single 84" culvert where there is no existing stone. Lori Sommer, NHDES Wetlands Bureau, concurred with this approach for mitigation.

Meli Dube, NHDOT Bureau of Environment, provided an update on the environmental review process. The Design team consulted with Kim Tuttle and John McGee from NH Fish and Game regarding concerns for aquatic and terrestrial organism passage. The concrete invert lining approach will not impede passage. The existing perch at Location 2 will be corrected by resetting existing stone to match the original design for a pool while raising the water depth to the new elevation of the invert liner, which will improve aquatic organism passage at the crossing. Kim Tuttle also suggested using wildlife friendly matting. This project is consistent with the Programmatic Biological Opinion for Transportation Projects within the Range of the Northern Long-Eared Bat and due to the short construction time-frame for this work which will require tree clearing during the northern long-eared bat active season, the project has been given a May Affect, Likely to Adversely Affect finding through consultation with the US Fish and Wildlife Service (USFWS). USFWS Concurrence is anticipated soon. This work also qualifies for the Section 106 Programmatic Agreement and has been given a "No Historic Properties Affected" finding under Appendix B.

Gino Infascelli, NHDES Wetlands Bureau, noted that his GIS layer showed a drainage area of 1.2 square miles for the twin 54" CMPs and asked that we double check our drainage area calculations before submitting the application package\*. Carol Henderson, NHFG, asked if reconstructing the stone to recreate the pool at the 54" CMPs would risk washing out again. C. Carucci responded that it is currently unknown if the original stone was built per plan or if the stone moved over time but that the proposed design will be installed correctly using large rocks that are not anticipated to move. M. Dube noted that flooding is not an issue at this location and is probably not the cause of the perch at this site.

\*C. Carucci has double checked StreamStats and found that the drainage areas are consistent with those reported during the meeting.

*This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.*

#### **Portsmouth-Kittery, #15731 (A000(909))**

Marc Laurin provided a summary of the purpose of the meeting. The NHDOT, in cooperation with the MaineDOT, is in the process of replacing the Sarah Mildred Long Bridge (US Route 1 Bypass) between Portsmouth, NH and Kittery, Maine. It was determined in February that the 2014 permit impact plans did not fully identify proposed grading and stone scour protection associated with the boat ramp. Additionally, impacts for a proposed floating dock to be constructed adjacent to a relocated boat ramp, located within the NH State Port Authority property, were not identified on the impact plans. The boat ramp and floating dock are required to provide functional replacement due to the impacts on the Port facilities, including the removal of a portion of the Barge Wharf and the removal of an existing boat launch ramp, and had always been intended to be constructed as part of the bridge project.

A request for a permit amendment for the NHDES permit has been sent to DES for the grading and scour protection at the boat ramp. DES requested a separate application for the floating dock. A request for a permit amendment for the Individual Permit has been sent to the Corps for the additional boat ramp impacts and the floating dock. Due to the time of year restriction that prohibits in-water work between March 15 and November 15, the contractor was instructed to complete the additional impacts prior to March 15. Therefore, the boat ramp has been completed, and the three piles for the floating dock have been installed, and permitting would be after-the-fact. The only work that remains is the installation of the floating dock segments on the piles.

NOAA was contacted about installing the floating dock segment during the time of year restriction. Mike Johnson had no concerns with this since attaching the dock to the piles would not create turbidity or noise impacts. However, Max Tritt requested additional consultation under the Endangered Species Act since the dock was not included in the Biological Assessment, and suggested that the Programmatic Consultation Form be used in conjunction with Army Corps permitting.

Lori Sommer asked who would own the dock. M. Laurin replied that it would be the Port Authority's dock and that it was being provided by DOT as part of the functional replacement for impacts from the bridge project.

There was discussion about why a separate NHDES application would be needed for the floating dock. Gino Infascelli stated that a dock in tidal waters requires the approval of the Governor and Council.

Mike Hicks noted that after-the-fact permitting may require additional approval from the Corps (Tolling Agreement).

Christine Perron noted that much of the floating dock overlaps with previously permitted impact areas, with less than 200 sq ft of impact located outside previous impact areas. She asked for confirmation from NHDES that the overlapping impacts did not need to be permitted again under the separate permit. G. Infascelli agreed that impacts did not need to be counted twice.

Bob Landry noted that the boat ramp was intended for emergency access only and would not be available for public use.

A question was asked about the dock's proximity to the navigational channel. M. Laurin replied that the dock would be well outside the navigational channel.

M. Hicks commented that it may not be preferable, or even possible to use the Programmatic Consultation Form for ESA consultation, in part because this is a Federal Highway Administration project. He stated that additional coordination would be necessary to determine the best course of action on ESA consultation and Corps permitting.

*This project has been previously discussed at the 06/19/2013, 09/18/2013, 01/15/2014, and 03/19/2014 Monthly Natural Resource Agency Coordination Meetings.*

#### **Hinsdale-Brattleboro, #12210C (A004(152))**

Christine Perron began by noting that the project had last been discussed at the February 2018 meeting, and the purpose of today's discussion was to review stormwater treatment, review the results of the hydraulic analysis, and confirm permitting requirements, including mitigation.

Trent Zanes provided a summary of treatment proposed for the project. Two treatment ponds will be constructed on the NH side of the river and one gravel wetland will be constructed in VT. The overall project will result in 1.62 acres of additional impervious (1.21 ac in NH; 0.41 ac in VT). Treatment areas in VT and NH will treat runoff from 3 acres of impervious (1.87 ac in NH; 1.13 ac in VT). Overall, the project will be treating approximately 1.9 times the amount of impervious area that is being added. All stormwater will enter the Connecticut River. The river is approximately 1,300' wide at this location, with water depths generally ranging from 14 ft to 27 ft, and velocities ranging from 1 ft/sec to 6 ft/sec. The watershed of the river at this location is 52,000 acres and the impervious area on this project represents 0.01% of watershed. (Subsequent to the meeting, it was realized that the area of the entire watershed is actually 6,218 square miles, a

much larger area than stated at the meeting.) As clarified at the February meeting, this section of the river is not impaired. There is currently no treatment in or near the project area and the project will add treatment on both sides of the river. This same site balancing type approach to treatment has been approved for the Lebanon-Hartford I-89 bridges over the Connecticut.

Mark Kern commented that the proposed treatment on the bridge approaches was a reasonable compromise for the proposed bridge scuppers.

C. Perron stated that the NHDOT recently completed the hydraulics analysis. The project will result in no impact to 100-yr flood hazard area and no increase in base flood elevation within the regulatory floodway. Therefore, a CLOMR will not be required. The project does require a VT Flood Hazard and River Corridor Permit from the VT Agency of Natural Resources.

C. Perron stated that she contacted Mike Adams at the VT Army Corps office and he confirmed that he is agreeable to authorizing the project under the NH and VT General Permits. Mike Hicks noted that he is also agreeable to this. Therefore, the project will not require an Individual Permit.

Permanent impacts resulting from this project entail the following:

209 LF of permanent channel impact from 5 new bridge piers

30 LF of permanent bank impact from one new bridge pier located at the NH bank

10 LF of channel and 10 LF of bank impact from a new drainage outfall just north of the existing bridge on the NH side (this will carry drainage from a new stormwater treatment area)

Total permanent linear impacts = 259 feet

As discussed at our last meeting, there will be no temporary fill needed for the temporary trestle. All temporary piles will be removed following construction. Based on the proposed permanent impacts, mitigation in the form of an in-lieu fee payment to the ARM Fund would be \$64,149.12.

These numbers may change slightly as the plans are finalized over the next few months. It is also anticipated that the proposed boat launch improvements downstream will be included in this application, and impacts from that effort will be added to mitigation totals as required.

The NHDOT contacted the Connecticut River Joint Commissions for input on potential mitigation priorities. The group responded just prior to the meeting and their input had not yet been discussed. NHDOT would consider this input to determine if there are any appropriate options available for mitigation. If the options proposed by the CRJC are not appropriate, then mitigation will be provided in the form of an ARM fund payment.

Mike Hicks asked for information on a bridge permit, rare species, and Section 106. C. Perron replied that the US Coast Guard has confirmed that the project will not require a Bridge Permit. The USFWS has no concerns with dwarf wedgemussel in this section of the river, and the project will qualify under the FHWA Programmatic Consultation on northern long-eared bat. The project will not result in impacts to historic resources.

Carol Henderson asked if the Department had coordinated with anyone at NH Fish & Game on the proposed boat launch design. She noted that prefabricated concrete was preferred over pavement. T. Zanes replied that he would be coordinating with NH Fish & Game on this in the near future.

*This project has been previously discussed at the 1/22/1998, 5/20/2009, 11/15/2017, and 2/21/2018 Monthly Natural Resource Agency Coordination Meetings.*

**Haverhill-Benton, #41297 (X-A004(587))**

This meeting presented the initial review of the project which involves bridge preservation/rehabilitation work on two bridges in Haverhill and Benton on Route 25. Both bridges cross over Oliverian Brook. This work will include the removal and replacement of bridge pavement and membrane, partial and full deck concrete deck repair, and the installation of new deck joints. In addition, the surface of the wingwalls on Bridge No. 067/092 in Haverhill will be repaired.

Bill Saffian of NHDOT presented a short discussion on these two bridge sites including the location in relation to the town lines. Both sites are similar in scope and will each be completed in two phases. Proposed work at the Benton site includes removing the existing pavement and membrane, replacing a portion of the deck, and partial and full depth repairs to the remaining portion of the deck. Proposed work at the Haverhill site includes removing the pavement and membrane, conducting partial and full depth deck repairs, replacing the coping and rail on the southerly fascia, and replacing the expansion joint. This site has parallel wing walls on the upstream side and angled wing walls on the downstream. Approximately 50% of the wing wall and abutment faces will need to be chipped out and repaired. Matt Urban asked if this was a temporary impact. Bill Saffian noted it was temporary in nature. There is no shore line to work from so it will require the construction of temporary scaffolding and water diversion during construction. Once the repairs to the wing walls and abutments have been completed there will be no change in the structure.

The time frame of the project was discussed. Bill Saffian noted that it was scheduled to be advertised this fall with work done in the 2019 construction season. Matt Urban noted that there was no need for mitigation since these projects were both temporary in nature and there is no impact at the Benton site.

Jim Rousseau if this portion of the waterway is tidal. Matt Urban said it was not. It also was discussed that DOT may have to send information to the Coast Guard about the repair project. This might be considered a navigable waterway but it would probably fall under the General Construction requirement.

Carol Henderson of NH Fish and Game noted that when doing the NEPA review Fish and Game sent a finding of no records. Amy Lamb has since had a new hit on Northern Harrier in the project area. Jim Fougere of The Smart Associates noted they would follow-up on that.

Matt Urban asked if the projects were determined to be under the Shoreland Protection Act. Jim Fougere noted that the agency coordination process has been started including the Historic review.

He would double check on the Shoreland issue. Otherwise, the wetland field work will be conducted as the weather cooperates but the bridges are fairly straight forward so no unusual issues are expected.

No other comments.

*This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meetings.*

**Westmoreland, #41624 (Non-Federal)**

Meli Dube, NHDOT Bureau of Environment, introduced the project. This work is part of an on-going effort to stabilize the outlet of a historic stone-arch culvert carrying the Cheshire Branch Rail Road Rail Trail over White Bridge Brook in the Town of Westmoreland. This area has seen significant damage due to flooding during large storm events including erosion and gradual collapse of the culvert over the course of several years. This project is subject to tight deadlines and budgetary restraints, as it is financed completely through Capital Funds with no federal contribution. The US Army Corps of Engineers will be the lead federal agency.

Brian Lombard, NHDOT Bureau of Rail and Transit, provided a detailed history of the damage, work and permitting that has occurred at the site. NHDES Permit 2003-02440 was issued in 2003 to clean up debris from a portion of the arch that collapsed earlier that year during a large storm event, FEMA Disaster #1489. Due to continued erosion and stone arch collapse, NHDES issued Permit 2008-01389 in 2008 to allow installation of a concrete pad floor inside the culvert to prevent undermining of the sidewalls. Continued collapse required the Rail Road embankment to be pushed back off of the end of the culvert in 2010. NHDES Permit 2008-01389 was amended in 2011 to allow installation of concrete toe walls under a side wall at the outlet of the arch. A series of heavy storms in 2013 resulted in additional collapse and washouts, emergency work to clear the stream and stabilize the area was performed under FEMA Project 24761 and NHDES Permit 2013-01945. Work at this project site was previously reviewed at the April 21, 2010 Natural Resource Agency Meeting.

B. Lombard indicated that the Rail and Transit will be partnering with the Bureau of Bridge Maintenance again to accomplish the work in order to meet budgetary restraints. Bridge Maintenance has assessed the current condition and developed a proposed plan. Remnants of the old stone wingwalls which mark the original end of the culvert are still in place approximately 45 feet downstream from the existing outlet. During flood events, water is trapped and creates a backwater which continuously erodes the base of the stone arch culvert and undermines the existing concrete slab that was installed in the culvert in 2008. The downstream channel also experiences significant erosion during flooding events and carrying streambed material several hundred feet downstream. Bridge Maintenance has proposed installing a headwall around the existing outlet, a 2' thick x 15' wide x 45' long concrete slab extending from the existing slab to the wingwalls downstream with 16" thick x 8' high x 45' long concrete walls on either side connecting to and supporting both the remaining stone arch and the wingwall remnants. The work will also pour an additional 8" thick x 33' wide x 14' long concrete slab apron to fill the area

between the wingwall remnants to ensure that the stone base is preserved from additional erosion. Finally, fabric and riprap will be installed around the headwall and along the new walls to prevent erosion during overtopping flood events. The intent of this approach is to preserve the remaining stone arch, the remaining wingwall remnants and prevent continued erosion of the stream.

B. Lombard detailed the anticipated wetland impacts based on the proposed slab and wall installations. Anticipated permanent impacts to the channel total 1,137, permanent impacts to the bank total 656 square feet and temporary impacts to the bank total 820 square feet. There is currently riprap extending 41' long x 20' wide on both sides of the stream, which will be reduced to a 41' x 10' wide strip which will reduce the area of riprap by 820 square feet.

Carol Henderson, NH Fish and Game, observed that it appears no tree clearing will be necessary based on the photos shown by B. Lombard. M. Dube confirmed that all tree around the work area have been previously cleared. Mike Hicks, US Army Corps of Engineers, stated that this work would likely have "No Effect" on northern long-eared bats and the 4(d) rule would be appropriate. M. Hicks also asked about coordination regarding Section 106 of the National Historic Preservation Act. M. Dube explained that the previous work which occurred in 2011 under the amended 2008-01389 NHDES Wetlands Bureau permit was determined to have an adverse effect on the historic stone arch and that the work in 2011 was considered to be Phase 1, this effort is considered to be a continuation of that adverse effect finding under Phase 2. Mitigation for the adverse effect finding was completed through a series of inspections and inventories of all the stone arch culverts in the surrounding area. M. Dube confirmed that continued coordination with the State Historic Preservation Officer is scheduled and will be completed appropriately.

C. Henderson inquired about the depth of the existing slab and the need for the depth of the proposed slab. Steve Johnson, NHDOT Bridge Maintenance, stated that the existing slab is between 8"-1' thick to cover the streambed and prevent undermining. The existing slab does have baffles to assist with fish passage. The proposed slab would be 2' thick and tie in to the elevation of the current slab, baffles could be installed on the proposed slab as well. S. Johnson noted that it would not be necessary to excavate down the entire 2' throughout the stream channel in order to install this slab due to erosion of the streambed. S. Johnson also stated that this depth of slab is necessary to install the sidewalls with minimal excavation and disturbance. Gino Infascelli, NHDES Wetlands Bureau, noted that he has been to the site several times and has seen fish using the stream on the outlet side. B. Lombard noted that the crossing does not convey any notable depth during low flow conditions.

M. Hicks asked if the culvert is considered undersized given the history of flooding. B. Lombard responded that it likely is just for the large storm events, but that replacement and installation of a full span stream-crossing compliant structure is outside the available funding and would result in a loss of the historic resource. B. Lombard provided a brief explanation of some alternatives considered, including reconstruction of the stone arch culvert, replacement and resizing, and all were considered to be infeasible. G. Infascelli noted that the proposed design, while preserving the historic elements, presents a significant loss of stream channel. S. Johnson explained that even if the full slab is not installed, the existing slab would need to be reinforced and armored and the collapsing stone arch stabilized in some way. M. Dube noted that the stream channel is currently heavily disturbed due to the continued erosion and placement of stone.

Matt Urban, NHDOT Bureau of Environment, suggested that mitigation be calculated for linear feet of impacts to the stream channel from the concrete pad and not to the banks as the walls are going in the same place as the existing riprap so the banks have already been highly disturbed. G. Infascelli stated that Lori Sommer, NHDES Wetlands Bureau, would need to be consulted to confirm this approach.

*This project has been previously discussed at the April 21, 2010 Monthly Natural Resource Agency Coordination Meeting.*